

**UNITED STATES DISTRICT COURT  
DISTRICT OF NEW JERSEY  
CAMDEN VICINAGE**

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**IN RE  
PAULSBORO DERAILMENT CASES**

**MASTER DOCKET NO.:  
13-CV-784 (RBK/KMW)**

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**CYNTHIA LORD, *et al.*,**

**Plaintiff,**

**vs.**

**CONSOLIDATED RAIL  
CORPORATION, *et al.*,**

**Defendants.**

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**DEFENDANTS CONSOLIDATED RAIL CORPORATION, NORFOLK SOUTHERN  
RAILWAY COMPANY AND CSX TRANSPORTATION, INC.'S  
MEMORANDUM OF LAW IN SUPPORT OF MOTION TO EXCLUDE THE  
EXPERT REPORT AND TESTIMONY OF ALY COHEN, M.D.**

Filed on behalf of Defendants,  
Consolidated Rail Corporation,  
Norfolk Southern Railway Company,  
and CSX Transportation, Inc.

Counsel of Record for This Party:

Brian D. Pagano, Esquire

BURNS WHITE LLC  
1800 Chapel Avenue West, Suite 250  
Cherry Hill, NJ 08002  
(856) 382-6006

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PAULSBORO DERAILMENT CASES	:	13-CV-784 (RBK/KMW)

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CYNTHIA LORD, <i>et al.</i> ,	:	
	:	
Plaintiff,	:	CASE NO. 1:12-7747 (RBK/KMW)
	:	
vs.	:	
	:	
CONSOLIDATED RAIL	:	
CORPORATION, <i>et al.</i> ,	:	
	:	
Defendants.	:	

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**DEFENDANTS CONSOLIDATED RAIL CORPORATION, NORFOLK SOUTHERN  
RAILWAY COMPANY AND CSX TRANSPORTATION, INC.’S  
MEMORANDUM OF LAW IN SUPPORT OF MOTION TO EXCLUDE THE  
EXPERT REPORT AND TESTIMONY OF ALY COHEN, M.D.**

NOW COME Defendants, Consolidated Rail Corporation, Norfolk Southern Railway Company and CSX Transportation, Inc. (“Defendants”), by and through their counsel, Burns White LLC, and submit this Memorandum of Law in Support of their Motion to Exclude the Expert Report and Testimony of Aly Cohen, M.D.

**I. PRELIMINARY STATEMENT**

Zena Custis (“Plaintiff”) brought this toxic tort action against Defendants following a November 30, 2012 train derailment in Paulsboro, New Jersey. In support of her allegations, Plaintiff intends to introduce the expert testimony of Aly Cohen, M.D., who will opine that Plaintiff developed a chronic dry cough from her brief, acute exposure to vinyl chloride following the

derailment, and that Plaintiff requires medical monitoring by a pulmonologist at six-month intervals for the purported long-term effects of vinyl chloride exposure. This Court should exercise its gatekeeping function under Federal Rule of Evidence 702 and *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993), and exclude Dr. Cohen's report and testimony as both unreliable and irrelevant.

Based on a review of her reports and testimony in this matter, it is clear that the opinions of Dr. Cohen are based solely on her subjective belief. Dr. Cohen failed to either identify or utilize any scientific method used to arrive at her conclusions and opinions. Not only are her opinions not based upon sufficient facts or data, but Dr. Cohen fails to cite even a single publication in her report. Dr. Cohen has made no attempt to estimate the quantity of vinyl chloride to which Plaintiff was allegedly exposed, or to conduct any independent analysis or research regarding the purported exposures. In fact, Dr. Cohen's proffered opinion that Plaintiff developed her cough symptoms from her alleged vinyl chloride exposure is based primarily on Plaintiff's own subjective account of symptoms and temporality.

Further, Dr. Cohen failed to perform a viable analysis to evaluate the relative impact of other more obvious causes of Plaintiff's cough. Dr. Cohen did not have access to Plaintiff's complete medical history, and either lacked or overlooked significant information relevant to her differential diagnosis.

Dr. Cohen's medical monitoring opinions are also speculative and unreliable. They should be excluded because they are based on flawed and unsupported assumptions regarding the long-term risks of acute vinyl chloride exposure, and because she fails to establish that the proposed monitoring program is medically appropriate.

In the end, Dr. Cohen's opinions are no more than subjective views without an objective scientific foundation. Her opinions are the product of litigation, not reliable application of generally accepted scientific methods and principles. Accordingly, the expert report, opinions and testimony of Dr. Cohen should be excluded, as they fail to satisfy the *Daubert* standards and Rule 702. Additionally, the probative value of such unsupported opinions is greatly outweighed by the probability that they will lead to unfair prejudice and jury confusion, thereby warranting exclusion under Fed. R. Evid. 403.

## **II. SUMMARY OF DR. COHEN'S QUALIFICATIONS AND OPINIONS**

Dr. Cohen is a medical doctor who is board certified in internal medicine, rheumatology and integrative medicine. For the purposes of this motion, Defendants do not challenge Dr. Cohen's qualifications as a physician.

Dr. Cohen will be offering her opinion on the issue of medical causation. She provided testimony in a deposition dated April 17, 2015, an expert report dated February 18, 2015, and a supplemental report dated April 10, 2015. *See* Cohen deposition, dated April 17, 2015, attached hereto as Exhibit A, Cohen Expert Report dated February 18, 2015, attached hereto as Exhibit B, and Cohen Supplemental Expert Report, dated April 10, 2015, attached hereto as Exhibit C. In addition to her examination of Plaintiff, Dr. Cohen reviewed a very limited amount of material that Plaintiffs' counsel provided to her, including Plaintiff's medical records and discovery responses, the expert reports of Plaintiff's experts, Dr. Brian Buckley and Dr. Panos Georgeopoulos,<sup>1</sup> as well as some news reports and the New Jersey Department of Health Environmental and Occupational

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<sup>1</sup> It is not clear to what extent Dr. Cohen relies on the Buckley or Georgeopolous reports for her opinion. Her supplemental report says only that she reviewed the reports, and they do not change her previous opinions. However, to the extent that she relies on these expert opinions to reach her own, and either of these individuals is precluded from giving expert testimony due to their own methodological problems, Dr. Cohen's opinion is likewise subject to exclusion.

Health Report. Cohen Dep. at 55, 57. In addition, Dr. Cohen indicated that she ran an online search on vinyl chloride, but she failed to list any articles in her report to support her opinion. *Id.* at 56.

Ultimately, based on these limited sources, Dr. Cohen concluded that “[w]ithin a reasonable degree of medical probability and/or surgery [sic], I believe that [Plaintiff’s] dry cough was initiated by exposure to aerosolized vinyl chloride.” Cohen Rep. at 4. Dr. Cohen also concludes that Plaintiff should be monitored at six month intervals by a pulmonologist for chronic asthma/reactive airway.

### **III. ARGUMENT AND CITATION OF AUTHORITIES**

#### **A. Standards for Evaluation of a Motion to Exclude Expert Testimony.**

It is well-established that district courts are to conduct a “rigorous” analysis to ensure that expert evidence satisfies the *Daubert* requirements and Rule 702 of the Federal Rules of Evidence before admitting expert testimony or opinions into evidence. *See, e.g., Daubert v. Merrill Dow Pharms, Inc.*, 509 U.S. 579 (1993). Briefly stated, those requirements are: (1) the witness must qualify as an expert; (2) the testimony or opinions must be reliable; and (3) the expert testimony or opinions must assist the trier of fact and “fit” the facts of the case. *Pineda v. Ford Motor Co.*, 520 F.3d 237, 244 (3d Cir. 2008).

With respect to the qualifications prong of the inquiry under *Daubert* and Rule 702, expert testimony should be excluded unless it is shown that the witness possesses sufficient specialized expertise in the field in which he or she is proffered as an expert. *Elcock v. Kmart Corp.*, 233 F.3d 734, 744 (3d Cir. 2000).

The reliability prong mandates “that the expert’s opinion must be based on the ‘methods and procedures of science’ rather than on ‘subjective belief or unsupported speculation’; the expert must have ‘good grounds’ for his or her belief.” *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 742 (3d

Cir. 1994) (quoting *Daubert*, 509 U.S. at 590). A court “is not required to simply ‘take the expert's word for it.’” *Soldo v. Sandoz Pharms. Corp.*, 244 F. Supp. 2d 434, 563 (W.D. Pa. 2003). As this Court has explained, the Third Circuit has developed an eight-part test for evaluating the reliability or scientific validity of purported expert testimony: (1) whether a method consists of a testable hypothesis; (2) whether the method has been subject to peer review; (3) the known or potential rate of error; (4) the existence and maintenance of standards controlling the technique’s operation; (5) whether the method is generally accepted; (6) the relationship of the technique to methods which have been established to be reliable; (7) the qualifications of the expert witness testifying based on the methodology; and (8) the non-judicial uses to which the method has been put. *United States v. Schiff*, 538 F. Supp. 2d 818, 833 (D.N.J. 2008) (quoting *United States v. Mitchell*, 365 F.3d 215, 235 (3d Cir. 2004)).

Finally, the expert testimony has to “fit”—that is, the court must determine that the opinion “is sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute.” *Daubert*, 509 U.S. at 591. Expert testimony that does not relate to the specific issues before the trier of fact “is not relevant and, ergo, non-helpful.” *Id.*

**B. Dr. Cohen’s Opinions are not Based Upon Any Discernible Methodology or Reproducible Analysis.**

*Daubert* requires that the expert “employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.” *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999). However, the scientific method of assessing cause-and-effect relationships between agents and health effects contrasts starkly with the lax reasoning employed by Dr. Cohen in this case.

In her report and deposition, Dr. Cohen makes no reference to the extensive literature on causation methods. Indeed, not only did Dr. Cohen fail to articulate any causation methodology, she

also failed to follow any objective, reproducible methodology. Undoubtedly, her “subjective belief or unsupported speculation” is wholly insufficient. *Paoli*, 35 F.3d at 742.

As in all toxic tort cases, the issue of causation requires a two-fold analysis: (1) whether the chemical is capable of causing the injuries alleged by the plaintiff (“general causation”) and (2) whether the chemical did in fact cause the plaintiff’s injuries (“specific causation”). *Cavallo v. Star Enter.*, 892 F. Supp. 756, 771 (E.D. Va. 1995), *aff’d in part, rev’d in part*, 100 F.3d 1150 (4th Cir. 1996); *Wright v. Willamette Indus.*, 91 F.3d 1105, 1106 (8th Cir. 1996). This accepted methodology has been approved by governmental agencies, international health organizations, and courts. *See, e.g., Cavallo*, 892 F. Supp. at 764 (*citing* World Health Organization, National Academy of Sciences, and various agencies of federal government). The method focuses on (1) the chemicals to which the plaintiff was exposed, (2) the dose of the chemicals received, (3) the temporal relationship between the exposure and the disease, (4) the amount of exposure necessary to cause the disease as reported in the scientific literature, and (5) the other possible explanations for the disease. *Id.*; *Wright*, 91 F.3d at 1106.

As shown below, Dr. Cohen did not attempt to quantify the dose of vinyl chloride received by Plaintiff; she failed to determine the amount of exposure necessary to cause the alleged symptom, as reported in the scientific literature; and she failed to account for the other possible explanations for Plaintiff’s cough. Nevertheless, Dr. Cohen still managed to determine that Plaintiff’s cough was the result of her brief and limited vinyl chloride exposure, without any reliable, identifiable scientific basis for doing so. This is precisely the type of analysis that Rule 702 is intended to exclude.

A similar failure resulted in the exclusion of a medical causation expert’s opinions in *Magistrini v. One Hour Martinizing Dry Cleaning*, 180 F. Supp.2d 584 (D.N.J. 2002). There, the

plaintiff's causation expert attempted to opine that the plaintiff's leukemia was caused by exposure to PCE, a chemical used in dry cleaning. The court excluded the expert because he could not articulate any objective, reproducible process or methodology he followed to reach his conclusions:

What this Court was never told, after three days of hearing and hundreds of pages of pre-hearing and post-hearing submission, is what 'methodical systematic process' was used by Dr. Ozonoff. And, it is that very process that is the heart of this Court's inquiry. Rule 702 requires the Court to determine whether "the process or technique...used in formulating the opinion is reliable. Here, by contrast, Dr. Ozonoff has failed to explain how he valued each piece of evidence, his methodological basis for relying heavily on certain pieces of evidence and his methodological basis for completely discounting others....

Dr. Ozonoff opines that causation is a "judgment" made about experimental data. "Judgment" does not substitute for scientific method; without a reliable method, result-oriented "judgment" cannot be distinguished from scientifically or methodologically based judgment. Where, as here, elements of judgment pervade the methodology, it is essential that the expert set forth the method for weighing the evidence upon which his opinion is based.

*Id.* at 584.

Here, there is simply no transparent or reproducible methodology that Dr. Cohen can identify to allow the Court to determine whether her opinions are a result-oriented "judgment" as opposed to a scientifically or methodologically-based judgment. Accordingly, her opinions must be excluded.

**C. Dr. Cohen has not Established "General Causation."**

Before attributing a person's disease to her exposure to a substance, science requires evidence that the substance is capable of causing the disease. *Cavallo*, 892 F. Supp. at 771; *see also* Federal Judicial Center at 419-22, 382-83 ("an agent cannot be considered to cause the illness of a specific person unless it is recognized as a cause of that disease in general").

Contrary to the standard toxicological methodology, Dr. Cohen failed to establish general causation as to any of Plaintiff's reported symptoms or the risk of long-term illness that Dr. Cohen

identifies. Indeed, Dr. Cohen's reports and deposition testimony failed to reference a single study to support her conclusions in this case. Further, when asked if she could cite to any relevant studies, Dr. Cohen admitted that she could not identify any source specifically. Cohen Dep. at 59. Dr. Cohen's failure to cite the scientific literature to develop her opinions is striking. Such a method is completely inadequate and unreliable.

This lack of scientific acceptance of the underlying theory is perhaps the key factor in a *Daubert* analysis. *Daubert*, 509 U.S. at 591-94. Dr. Cohen has not tested her theory that the level of exposure allegedly experienced by Plaintiff can cause her symptoms or, at some unspecified point in time, lead to asthma/reactive airway disease. She has not published her theory in any peer-reviewed scientific journal, and she is not able to identify any other scientist who has done so. For these reasons alone, the exclusion of her testimony is entirely justified.

**D. Dr. Cohen's Opinions are not Supported by Sufficient Facts or Data.**

Even if the methodology used by the expert satisfies some of the *Daubert* prerequisites, an expert's opinion is not admissible if it is not grounded on sufficient and reliable data. Fed R. Evid. 702(1). The expert's opinion is not grounded on sufficient data if the data is faulty, untrustworthy, contradicted by other uncontested and unconsidered data, or otherwise incomplete or inadequate.

An expert may not rely on untrustworthy data. If the data are unreliable, an expert's analysis based upon the data is likewise inherently unreliable. *See, e.g., Martincic v. Urban Redevel. Auth.*, 844 F. Supp. 1073, 1075-76 (W.D. Pa. 1994), *aff'd*, 43 F.3d 1461 (3d. Cir. 1994).

In her report, Dr. Cohen writes "[Plaintiff] states she tasted a sweet taste and sweet odor, which leads me to believe she was in fact exposed to vinyl chloride over the several days and

months that followed.”<sup>2</sup> Cohen Rep. at 3. However, Dr. Cohen’s reliance on Plaintiff’s subjective self-report as a basis for her opinions does not withstand the *Daubert* test. Notably, the Third Circuit has affirmed the exclusion of expert testimony where, as here, an expert was “retained strictly for litigation purposes [and] based ... [a] causation [opinion] on nothing more than a plaintiff’s self-report.” *In Re: TMI Litig.*, 193 F.3d 613, 698 (3rd Cir. 1999). Similarly, in *Paoli*, the Third Circuit explained that in the litigation context, reliance on patient statements should not be the sole basis for an expert’s opinion; the expert should seek some form of corroborative evidence. *See Paoli*, 35 F.3d at 762. This is because in such a situation “the usual [ ] candor with a physician—the hope of successful treatment or diagnosis—[is] wholly lacking,” and plaintiffs have every incentive to “be overinclusive,” *i.e.*, to exaggerate. *Id.* The court was therefore “satisfied that where [experts] based their conclusion as to a plaintiff’s symptoms solely on the plaintiff’s self-report of illness in preparation for litigation, the district court act[s] within its discretion in excluding the testimony as based on an unreliable source of information.” *Id.* The rationale of *TMI* and *Paoli* apply equally here. Dr. Cohen seemingly based her entire causation opinion upon only one, biased source of information—the self-report of Plaintiff in the current litigation.

**E. Dr. Cohen does not Know the Dose Received by the Plaintiff.**

The first law of toxicology is “the dose makes the poison.” Bernard D. Goldstein and Mary Sue Henifin, *Reference Guide on Toxicology* in *Federal Judicial Center Reference Manual on Scientific Evidence* (hereafter, “*Reference Guide on Toxicology*”), at 636 (3d ed. 2011). Indeed, “all chemical agents are intrinsically hazardous – whether they caused harm is only a question of dose.”

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<sup>2</sup> To the extent that Dr. Cohen is expressing an opinion as to odor and exposure to vinyl chloride, any such theory is speculative and lacks scientific reliability. Odor threshold is not a valid and reliable technique for determining whether or not an individual has been exposed to vinyl chloride, the intensity of that presumed exposure, or any putative health effect of that exposure. *See* Declaration of Douglas L. Weed, M.D., M.P.H., Ph.D., attached hereto as Exhibit D, Exhibit A at 27-33.

*Id.* Thus, the toxicological method requires at least an estimate of dose to determine whether the dose was sufficient to cause injury. *Cavallo*, 892 F. Supp. at 772-73; *Wright*, 91 F.3d at 1105, 1107. (“At a minimum, we think that there must be evidence from which the factfinder can conclude that the plaintiff was exposed to levels of that agent that are known to cause the kind of harm that the plaintiff claims to have suffered”). Without a reference to dose, the expert is engaging in nothing more than speculation.

The requirement of dose is highlighted by the Bradford-Hill criteria, a universally accepted series of scientific factors used to determine medical causation. *See Castellow v. Chevron USA*, 97 F. Supp. 2d 780 (S.D. Tex. 2000). The Bradford Hill factors include whether: (1) a temporal relationship exists; (2) the association is strong or weak; (3) a dose-response relationship exists; (4) the results have been replicated; (5) the association is biologically plausible; (6) alternative explanations have been adequately considered; (7) the association exhibits specificity; and (8) the findings are consistent with other knowledge. *See Magistrini v. One Hour Martinizing Dry Cleaning*, 180 F. Supp.2d 584, 592 (D.N.J.2002)(citing the Bradford Hill factors). The Bradford-Hill criteria demand scrutiny of a number of factors before any causation conclusion is appropriate—including the dose-response relationship between the exposure to the chemical and the risk of developing the disease. *See Castellow*, 97 F. Supp. at 786 n. 2.

A particularly instructive case regarding the impact of dose is *Savage v. Union Pac. R.R. Co.*, 67 F. Supp.2d 1021 (E.D. Ark. 1999). In rejecting plaintiff’s expert’s causation testimony under *Daubert*, the court stated:

There is sufficient evidence that Plaintiff was around and physically in touch with the creosote. . . . But Plaintiff has produced no scientific data showing the *nature* of creosote exposure required to initiate or promote the development of [skin cancer]. Nor has he shown the *level* of such exposure needed to cause such skin cancer in humans generally. Nor does he show with any degree of scientific reliability the level of his own exposure. In sum, Plaintiff has failed to present the fundamental

information necessary to establish the scientific validity of Dr. Boyd's opinions. For this reason, Dr. Boyd's opinions with respect to creosote cannot meet the requirements of *Daubert*.

*Id.* at 1032-34

Here, Dr. Cohen cannot quantify Plaintiff's level of exposure to vinyl chloride, or state whether her exposure to vinyl chloride was of a significant enough level to have caused her to develop a chronic cough. Instead of trying to equate Plaintiff's location at the time of the derailment to any exposure measurements, she instead relies on Plaintiff's word. *See* Cohen Dep. at 112. ("Well, she told me that she was right in the mix."). Dr. Cohen does not know whether Plaintiff's house was in the evacuation zone, whether she was forced to shelter in place, or the exposure data that corresponds with either of these zones. *Id.* at 112-113. In fact, when asked what her understanding is of the level of exposure to vinyl chloride to manifest a cough and whether Plaintiff was exposed to such an amount, Dr. Cohen responded "[w]ell, I have no concrete evidence of that. I'm going by [Plaintiff's] recounting of the story." *Id.* at 113-114.

Lay opinions of this sort provide a wholly insufficient basis for an expert to extrapolate the amount of toxins to which Plaintiff was exposed. *Wills v. Amerada Hess Corp.*, 379 F.3d 32, 49 (2nd Cir. 2004). Where, as here, a proffered expert offers only unverified statements unsupported by any scientific method, the proffered testimony is properly barred.

#### **F. Dr. Cohen Improperly Replies on Temporal Proximity**

Also invalid is Dr. Cohen's flawed reliance on temporal proximity as the basis for her opinion.

Q: This is again based on what she told you, that she developed a cough shortly after exposure to the site of vinyl chloride spill, correct?

A: Yes.

Cohen Dep. at 111.

It is well settled that a causation opinion based solely on a temporal relationship is not derived from scientific method and is therefore insufficient to satisfy the requirements of the Federal Rules of Evidence. *Schmaltz v. Norfolk & W. Ry. Co.*, 878 F. Supp. 1119 (N.D. Ill. 1995) (citing *Porter v. Whitehall Labs. Inc.*, 9 F.3d 607, 611 (7th Cir. 1993)); *Conde v. Velsicol Chem. Co.*, 804 F. Supp. 972, 1023 (S.D. Ohio 1992), *aff'd*, 24 F.3d 809 (6th Cir. 1994); *Daubert*, 43 F.3d at 1319. In this case, Dr. Cohen flip-flops scientific reasoning in mistaking sequence for consequence. She assumes that Plaintiff's cough was caused by her alleged vinyl chloride exposure, and back-fills this assumption with the hypothesis that the temporal proximity between the development of the cough and the alleged exposure proves a connection between these events. All she has shown, however, is that one event followed the other in time.

**G. Dr. Cohen Failed to Reliably Exclude Other Alternative Causes**

Dr. Cohen failed to properly and scientifically rule out alternative causes for Plaintiff's cough. The Third Circuit has affirmed the exclusion of testimony where, as here, the expert "made no effort to employ differential diagnosis to eliminate possible alternative causes of [plaintiff's conditions]." *Paoli*, 35 F.3d at 767. Relying on *Paoli*, this Court has concluded that "where a defendant points to a plausible alternative cause and the doctor offers no reasonable explanation for why she still concludes that [her cause] was a substantial factor in bringing about the plaintiff's disease, that doctor's methodology is unreliable." *Magistrini*, 180 F. Supp. at 609 (internal quotations omitted); *Diaz v. Johnson Matthey, Inc.*, 893 F. Supp. 358, 376 (D.N.J. 1995) (excluding expert medical testimony on issue of specific causation where physician "did little, if anything, to rule out alternative causes" and either "ignored" or offered "no reasonable explanation" for discounting "several [alternative] possible causes" for plaintiffs asthma identified by defendant).

Dr. Cohen's analysis falls woefully short of a differential diagnosis, as she wholly fails to meaningfully consider Plaintiff's obesity, the side effects of the prescription drugs that she was on, or other occupational and environmental factors as alternative causes for her cough symptoms. Although Dr. Cohen acknowledges that all of Plaintiff's past and present medications list cough as a side-effect, she did not consider this as an alternative cause for Plaintiff's symptoms. Specifically, Plaintiff was on Zestoretic and then changed to Lisinopril, both of which document cough as a known side effect. Cohen Dep. at 79-81. Likewise, Dr. Cohen also fails to account for her use of Neurontin for her carpal tunnel syndrome, which also lists cough as a possible side effect. *Id.*

Instead, Dr. Cohen indicates that she relied primarily on Plaintiff's own self-serving statement for the fact that she did not have a cough prior to the derailment. *Id.* at 118. While Dr. Cohen claims to have reviewed limited prior medical records of Dr. Dave, who treated Plaintiff following the derailment, she admitted that his records were illegible to her and she did nothing to follow-up with him for clarification. *Id.* at 78. Accordingly, she has no basis whatsoever for her opinion that Plaintiff's cough originated at the time of the derailment, other than Plaintiff's own say so.

Moreover, Dr. Cohen testifies that in building a causation picture, it is important to know the person's occupation, the water they drink, the air they breathe, the food they eat, the chemicals that they put in and around their body. *Id.* at 98. Yet, when analyzing Plaintiff, Dr. Cohen failed to look at all of these factors.

For example, while she acknowledges that bus drivers can develop pulmonary issues as a result of their exposures to particulate air pollution, she jumps to the conclusion that Plaintiff's occupation was not the source of her cough given the fact that she had only been a bus driver for four years. *Id.* at 95. However, Dr. Cohen was unaware as to Plaintiff's former occupation,

including whether she had driven a bus prior to her current job. She was also unaware of, and failed to research the quality of, the drinking water or the air in Paulsboro, despite the fact that she acknowledges that “New Jersey air quality is ripe with plenty of chemicals from many manufacturing areas.” *Id.* at 99-102.

Dr. Cohen’s failure to account for these alternate factors strongly indicates that her conclusions are not grounded in reliable scientific methods, as required by *Daubert*. Dr. Cohen is completely unable to articulate any basis whatsoever for her conclusion that Plaintiff’s very brief and limited acute exposure to vinyl chloride, rather than other possible known causes, led to her cough. How did she rule out alternative causes and rule in vinyl chloride? What were the diagnostic techniques she used to do so? What were the factors weighing toward vinyl chloride (*i.e.*, level of the dose, timing of the dose) as opposed to other causes? Dr. Cohen cannot articulate a process or method she followed, much less scientific support, for her opinions. Her inability to do so renders her assertion that Plaintiff’s cough was caused by her exposure to vinyl chloride, as opposed to other known factors, sheer speculation. *See Magistrini*, 180 F. Supp. 2d at 610 (excluding testimony of expert who “discounted entirely smoking as a risk factor, without discussing why smoking was ruled out as a cause of Plaintiff’s illness”); *Soldo v. Sandoz Pharms. Corp.*, 244 F. Supp. 2d 434 (W.D. Pa. 2003) (excluding causation opinion where expert could not rule out idiopathic or alternative causes for plaintiff’s stroke).

Inference-making based on unsupported assertions and avoidance of inconvenient findings is not scientific method. For these reason, Dr. Cohen cannot identify any other doctor who will support her proffered causation theory, much less demonstrate “widespread acceptance.” *See Daubert*, 509 U.S. at 591-94.

**H. Dr. Cohen's Opinions Regarding Medical Monitoring Should be Excluded as Speculative and Unreliable.**

Dr. Cohen recommends that Plaintiff be “followed and monitored at 6 month intervals by a pulmonologist” for possible long-term impacts, including chronic asthma/reactive airway disease. Cohen Rep. at 4. However, Dr. Cohen’s opinion should be excluded because it is based on flawed and unsupported assumptions regarding the long-term risks of acute vinyl chloride exposure, and because she fails to establish that the proposed monitoring program is medically appropriate.

**1. Dr. Cohen's Medical Monitoring Opinion is Based on Flawed and Unsupported Assumptions Regarding the Long-Term Risks of Acute Exposure to Vinyl Chloride.**

As discussed *supra* Section C, there is no causal relationship between acute exposure to vinyl chloride and the future illness for which Dr. Cohen claims Plaintiff must be monitored. For this reason alone, Dr. Cohen’s opinion as to Plaintiff’s need for medical monitoring as a result of her exposure to vinyl chloride is fundamentally unreliable. *See* Weed Declaration, Exhibit B at 5. (given the available evidence, exposure to vinyl chloride appears to have minimal or no effect on no-malignant respiratory disease.). Put simply, Dr. Cohen’s opinion that Plaintiff is at risk for future respiratory disease based on Plaintiff’s brief, acute exposure to vinyl chloride is nothing more than “unsupported speculation.” *Paoli*, 35 F.3d at 742.

**2. Dr. Cohen Fails to Establish that the Proposed Monitoring is Medically Appropriate.**

Dr. Cohen’s medical monitoring opinion is also subject to exclusion for the independent reason that she provides no basis as to why bi-annual visits to a pulmonologist are medically necessary after a brief, acute exposure to vinyl chloride. Indeed, she does not even diagnose Plaintiff with a condition that requires such monitoring. Instead, she relies on Plaintiff’s stated symptoms to recommend a “full workup with pulmonary testing,” Cohen Rep. at 4, thus indicating

that she simply does not know whether Plaintiff has a condition that warrants medical monitoring in the first place.

Absent any peer-reviewed studies showing that the monitoring recommended by Dr. Cohen is medically appropriate in these circumstances, her opinion does not withstand the *Daubert* test. *See In re Ingram Barge Co.*, 187 F.R.D. 262, 266 (M.D. La. 1999) (rejecting expert testimony on medical monitoring under *Daubert* because the expert “could point to no studies or peer-reviewed literature which suggested that the testing and monitoring he recommends should be performed”); *Hansen v. Mountain Fuel Supply Co.*, 858 P.2d 970, 980 (Utah 1993) (holding that the expert must show that “administration of the test to a specific plaintiff is medically advisable for that plaintiff,” and that the sought medical monitoring program fails if the “burdensome frequency of the monitoring procedure, its excessive price, or its risk of harm to the patient” outweighs the program’s benefits).

**I. The Probative Value of Dr. Cohen’s Opinions is Outweighed by the Dangers of Unfair Prejudice, Confusion of the Issues, and Misleading the Jury.**

Federal Rule of Evidence 403 requires that evidence, although relevant, may still be excluded from trial, if its probative value is outweighed by the danger of unfair prejudice, confusion of the issues, and misleading the jury; and, in this case, the probative value of Dr. Cohen’s opinions is clearly outweighed by these concerns.

As described herein, Dr. Cohen’s testimony is too vague and general to be relevant. For the same reasons, its admission into evidence would be unduly prejudicial to Defendant. Accordingly, it is clear that the probative value of Dr. Cohen’s opinions is outweighed by the considerations of Rule 403, and should be excluded from trial.

**IV. CONCLUSION**

For the foregoing reasons, Defendants, Consolidated Rail Corporation, Norfolk Southern Railway Company and CSX Transportation, Inc., respectfully request that this Honorable Court exclude the proffered expert testimony of Aly Cohen, M.D. Defendants also request that the Court convene a *Daubert* evidentiary hearing on this Motion.

Respectfully Submitted,

/s/ Brian D. Pagano

Brian D. Pagano, Esquire

BURNS WHITE LLC

1800 Chapel Avenue West, Suite 250

Cherry Hill, NJ 08002

(856) 382-6012

Email: [bdpagano@burnswhite.com](mailto:bdpagano@burnswhite.com)

*Attorney for Defendants,*

*Consolidated Rail Corporation, Norfolk Southern  
Railway Company and CSX Transportation, Inc.*

**CERTIFICATE OF SERVICE**

I hereby certify that on this 21<sup>st</sup> day of May, 2015, a copy of the within Memorandum of Law in Support of their Motion to Exclude the Expert Report and Testimony of Aly Cohen, M.D. was served on all counsel of record via e-file.

BURNS WHITE LLC

By: /s Brian D. Pagano  
Brian D. Pagano, Esquire  
1800 Chapel Avenue West, Suite 250  
Cherry Hill, NJ 08002  
(856) 382-6012

*Attorneys for Defendants,  
Consolidated Rail Corporation, Norfolk  
Southern Railway Company, and CSX  
Transportation, Inc.*